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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/775,514	02/05/2001	Toshihiro Tsumura	49657-983	8460
7590 09/09/2005 MCDERMOTT, WILL & EMERY 600 13th Street, N.W. Washington, DC 20005-3096			EXAMINER PHAN, HANH	
			ART UNIT 2638	PAPER NUMBER

DATE MAILED: 09/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/775,514

Applicant(s)

TSUMURA, TOSHIHIRO

Examiner

Hanh Phan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 February 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3, 6, 8, 10, 12, 13 and 18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-3 is/are allowed.
- 6) ☒ Claim(s) 6, 8, 10, 12, 13 and 18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. This Office Action is responsive to the Amendment filed on 06/13/2005.
2. Applicant's election without traverse of Species A (Fig. 1, upon which claims 1-3, 6, 8, 12, 13 and 18 are readable) in the reply filed on 06/13/2005 is acknowledged.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 18 is rejected under 35 U.S.C. 102(b) as being anticipated by Eastmond et al (US Patent No. 5,371,623).

Regarding claim 18, referring to Figure 3, Eastmond teaches an optical receiving apparatus for a multi-channel optical communication system comprising:

a photoreceiver (i.e., photoreceiver 320, Fig. 3) receiving a bundle of lights containing a plurality of light beams modulated respectively by separate signals (i.e., a bundle of lights containing a plurality of light beams modulated respectively by separate signals 312', Fig. 3) and having a plurality of photoreceptors (i.e., photodetectors 322, Fig. 3) arranged correspondingly to an arrangement of the plurality of light beams; and

a demodulator ( Fig. 3) for demodulating from respective outputs of the plurality of photoreceptors a signal transmitted by each of the plurality of light beams (col. 4, lines 29-67 and col. 5, lines 1-14).

5. Claim 18 is rejected under 35 U.S.C. 102(b) as being anticipated by Jansson et al (US Patent No. 5,278,687).

Regarding claim 18, referring to Figures 1 and 2, Jansson teaches an optical receiving apparatus for a multi-channel optical communication system comprising:

a photoreceiver (i.e., photoreceiver 28, Fig. 1) receiving a bundle of lights containing a plurality of light beams modulated respectively by separate signals (i.e., wavelength channels  $\lambda_1$ ,  $\lambda_2$ ,  $\lambda_3$ ..., Fig. 1) and having a plurality of photoreceptors (i.e., detectors 28, Fig. 1) arranged correspondingly to an arrangement of the plurality of light beams; and

a demodulator (i.e., signal conditioning 30, Fig. 1) for demodulating from respective outputs of the plurality of photoreceptors a signal transmitted by each of the plurality of light beams (col. 8, lines 40-61, col. 5, lines 23-28 and col. 11, lines 1-14).

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 6, 8, 10, 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Green et al (US Patent No. 6,624,916) in view of Weverka et al (US Patent No. 6,501,877).

Regarding claims 6, 8, 10, 12 and 13, referring to Figures 2-4 and 9-11, Green discloses a multi-channel optical communication system comprising:

a retro-reflector (i.e., retro-reflector and modem unit 13, Figs. 2 and 9) reflecting incident light in the direction of a source of the incident light; and

a modulator (i.e., modulator 53, Figs. 3 and 4) for modulating the light reflected by the retroreflector according to a transmission signal (see from col. 4, line 63 through col. 8, line 35 and see from col. 10, line 51 through 11, line 46, and see col. 13, lines 17-27).

Green differs from claims 6, 8, 10, 12 and 13 in that he does not specifically teach a plurality of reflection condition control devices arranged on a reflection plane of a retroreflector and capable of controlling optical reflection independently of each other and a driver for separately controlling each of the reflection condition control devices according to the transmission signal. However, Weverka in US Patent No. 6,501,877 teaches a plurality of reflection condition control devices arranged on a reflection plane of a retroreflector and capable of controlling optical reflection independently of each other and a driver for separately controlling each of the reflection condition control devices according to the transmission signal (Figs. 5B and 5D, col. 8, lines 16-63 and col. 9, lines 14-24). Therefore, it would have been obvious to one having skill in the art at the time the invention was made to incorporate the plurality of reflection condition

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control devices arranged on a reflection plane of a retroreflector and capable of controlling optical reflection independently of each other and a driver for separately controlling each of the reflection condition control devices according to the transmission signal as taught by Weverka in the system of Green. One of ordinary skill in the art would have been motivated to do this since Weverka suggests in column 8, lines 16-63 and col. 9, lines 14-24 using such the plurality of reflection condition control devices arranged on a reflection plane of a retroreflector and capable of controlling optical reflection independently of each other and a driver for separately controlling each of the reflection condition control devices according to the transmission signal have advantage of allowing the reflecting the modulated beams to the receiving station where it may be detected by a receiver.

#### ***Allowable Subject Matter***

8. Claims 1-3 are allowed.

#### ***Response to Arguments***

9. Applicant's arguments with respect to claims 1-19 have been considered but are moot in view of the new ground(s) of rejection.

#### ***Conclusion***

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Phan whose telephone number is (571)272-3035.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Vanderpuye, can be reached on (571)272-3078. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-4700.

  
**HANH PHAN**  
**PRIMARY EXAMINER**